

Valuing and mainstreaming biodiversity and protected areas



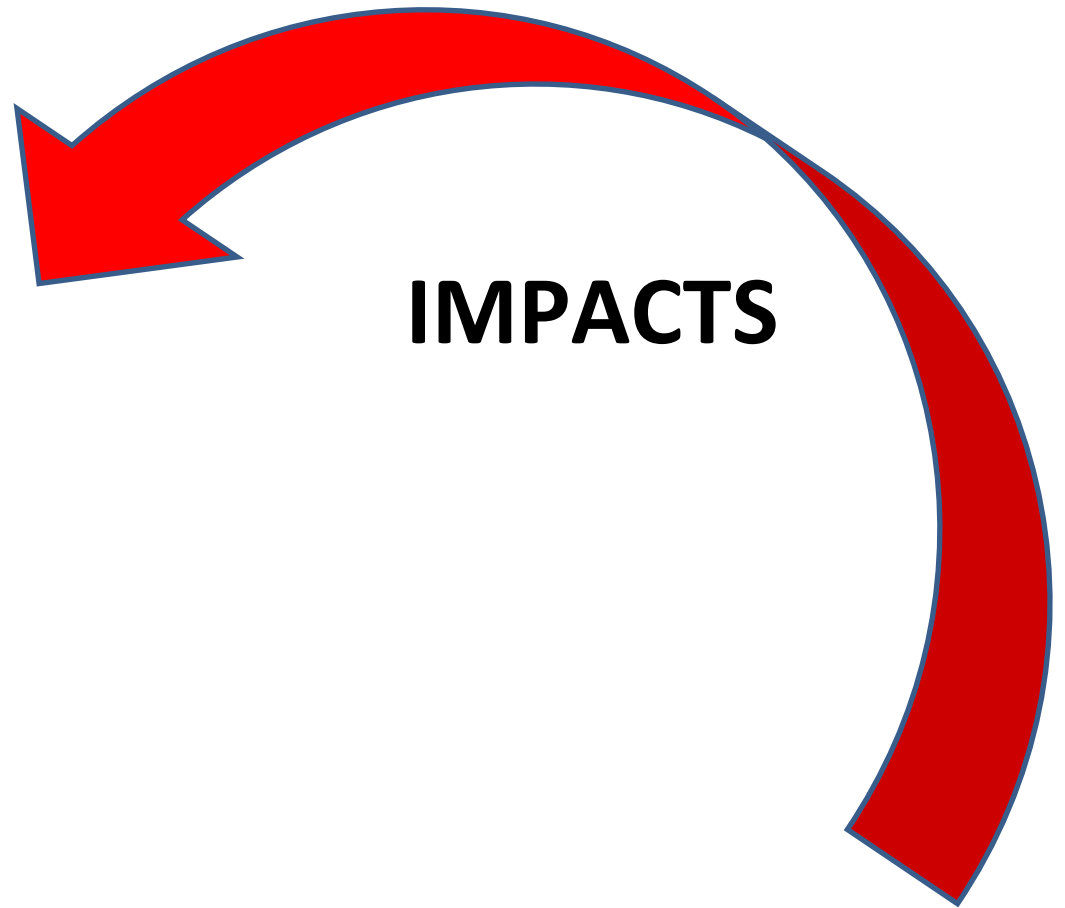
Jamison Ervin, UNDP



35000 ha of forest store over 1.4 billion gallons of water per day, serving more than 8 million people daily

The cost is \$320 million, BUT this investment avoids \$6 billion in water treatment costs (plus \$300 million/year in operating costs)



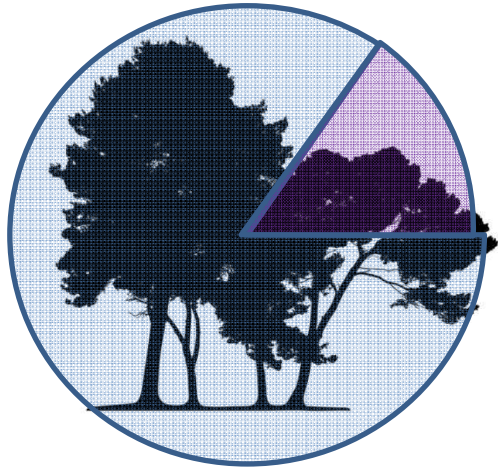




IMPACTS

BENEFITS

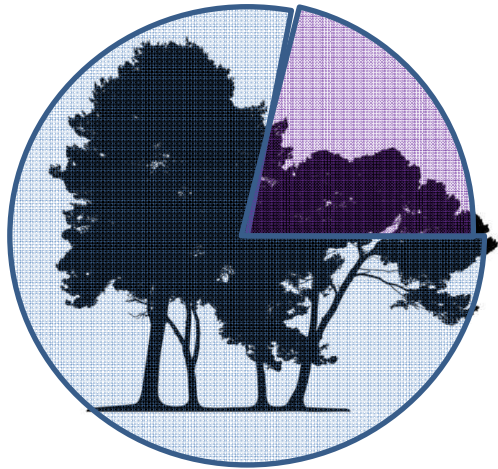




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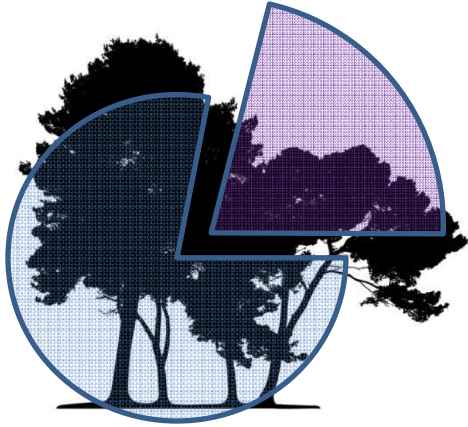




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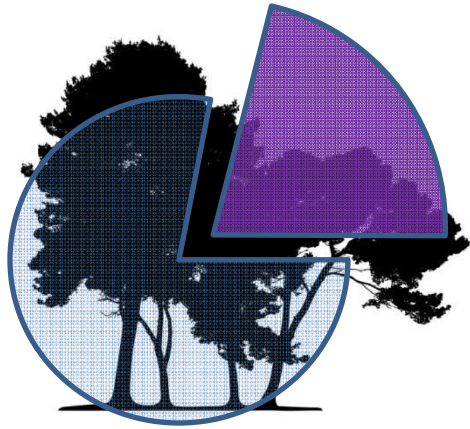




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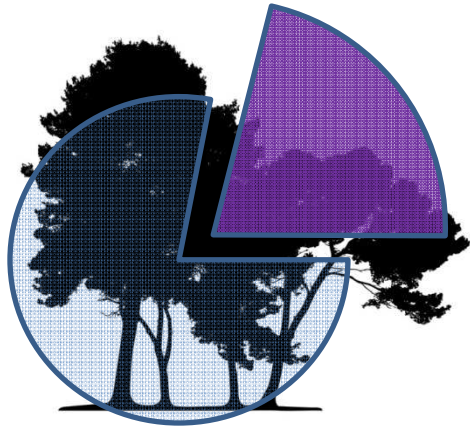


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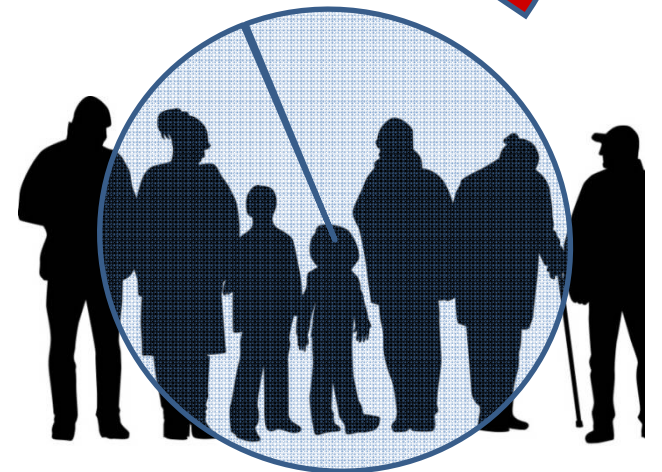
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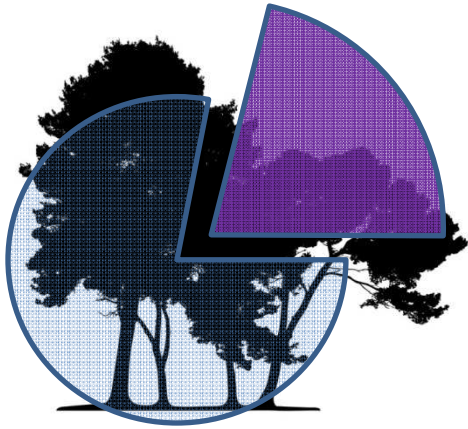
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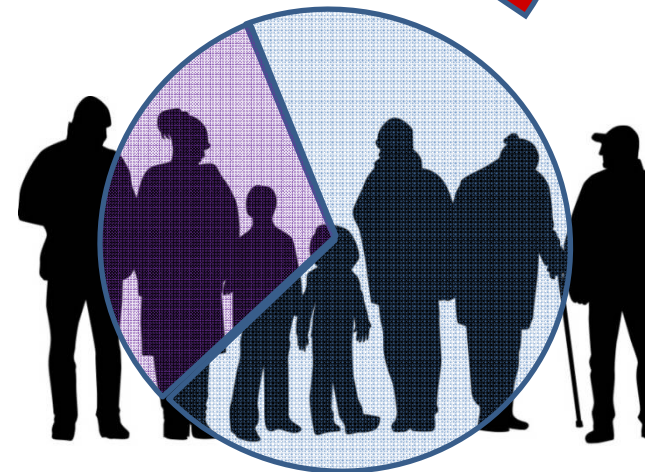
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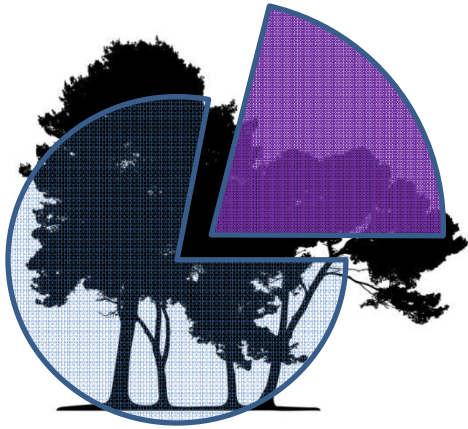
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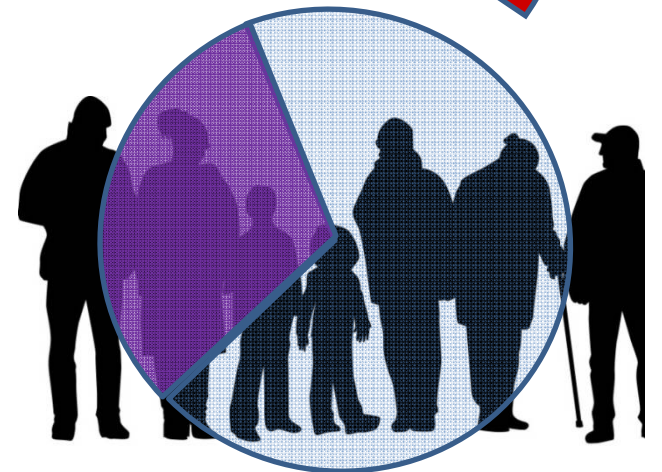
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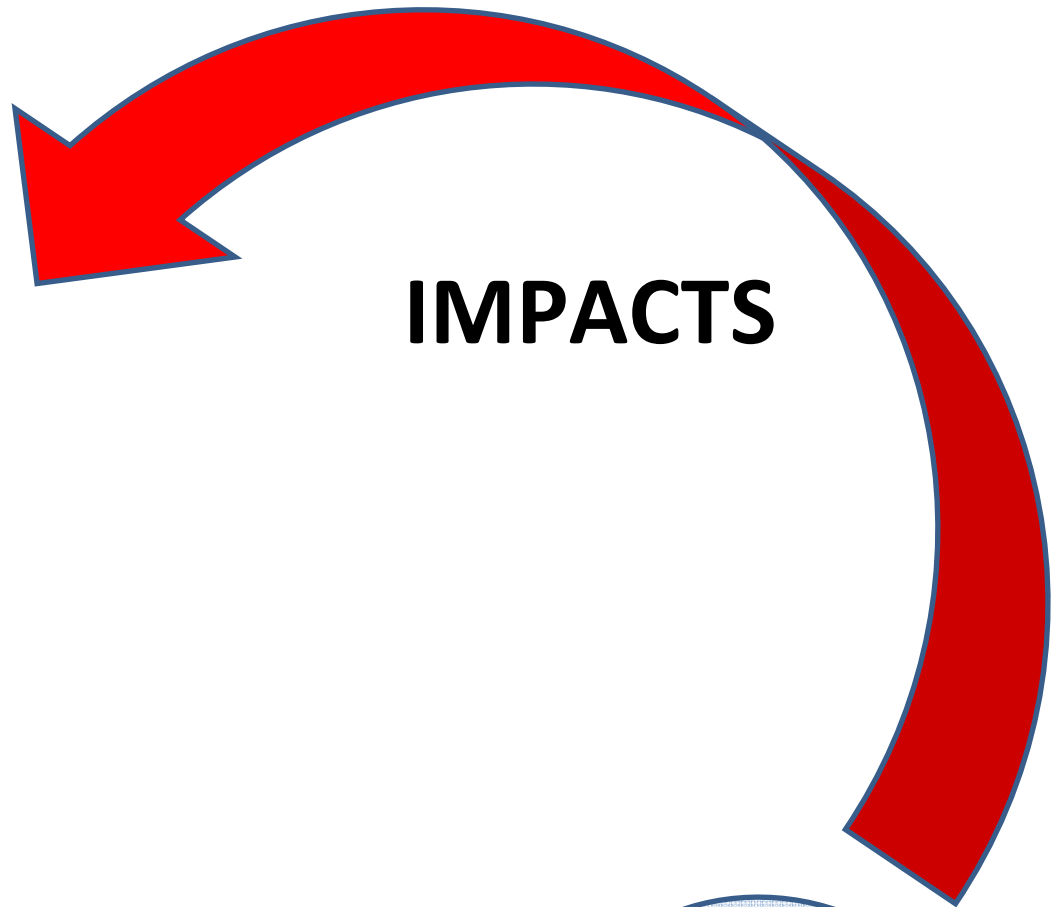
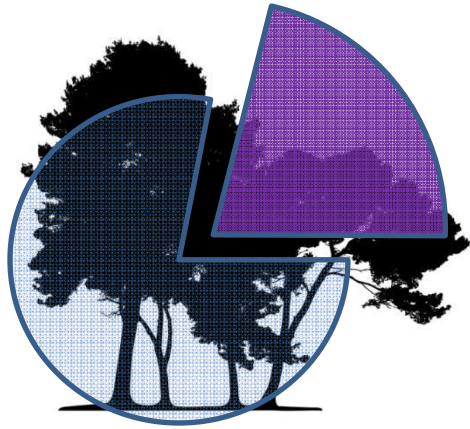


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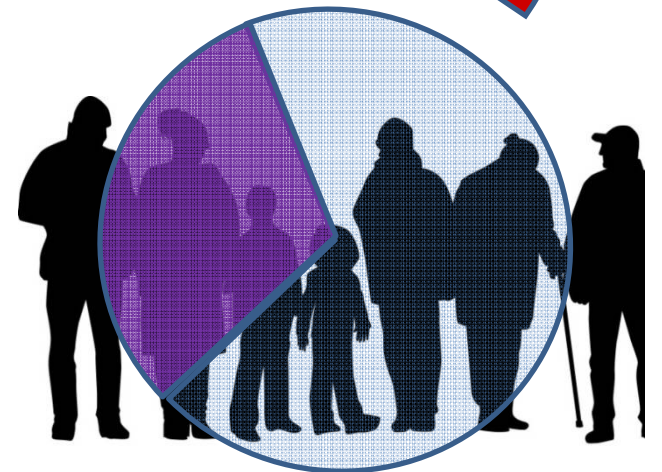




IMPACTS

BENEFITS

Under valued





IMPACTS



BENEFITS

Under valued



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Under valued



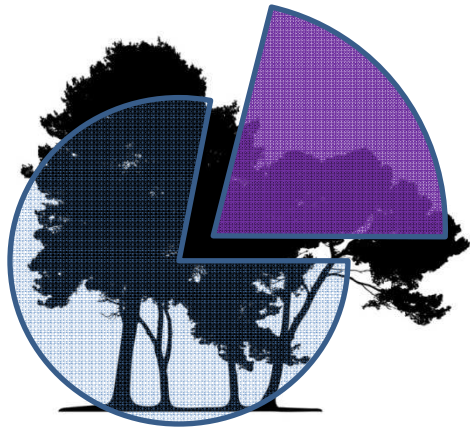
IMPACTS

“Vicious
cycle”

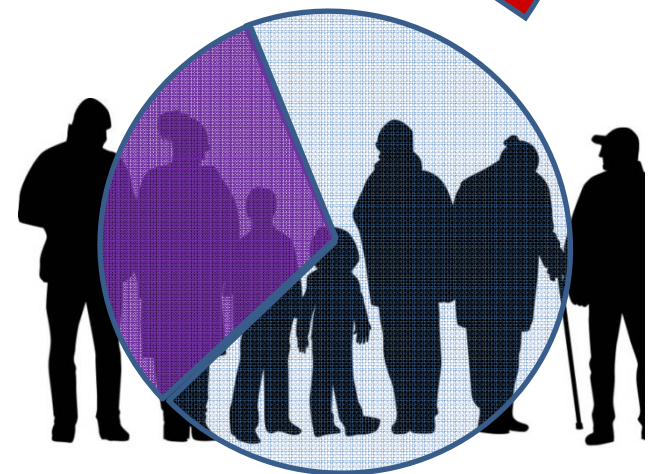
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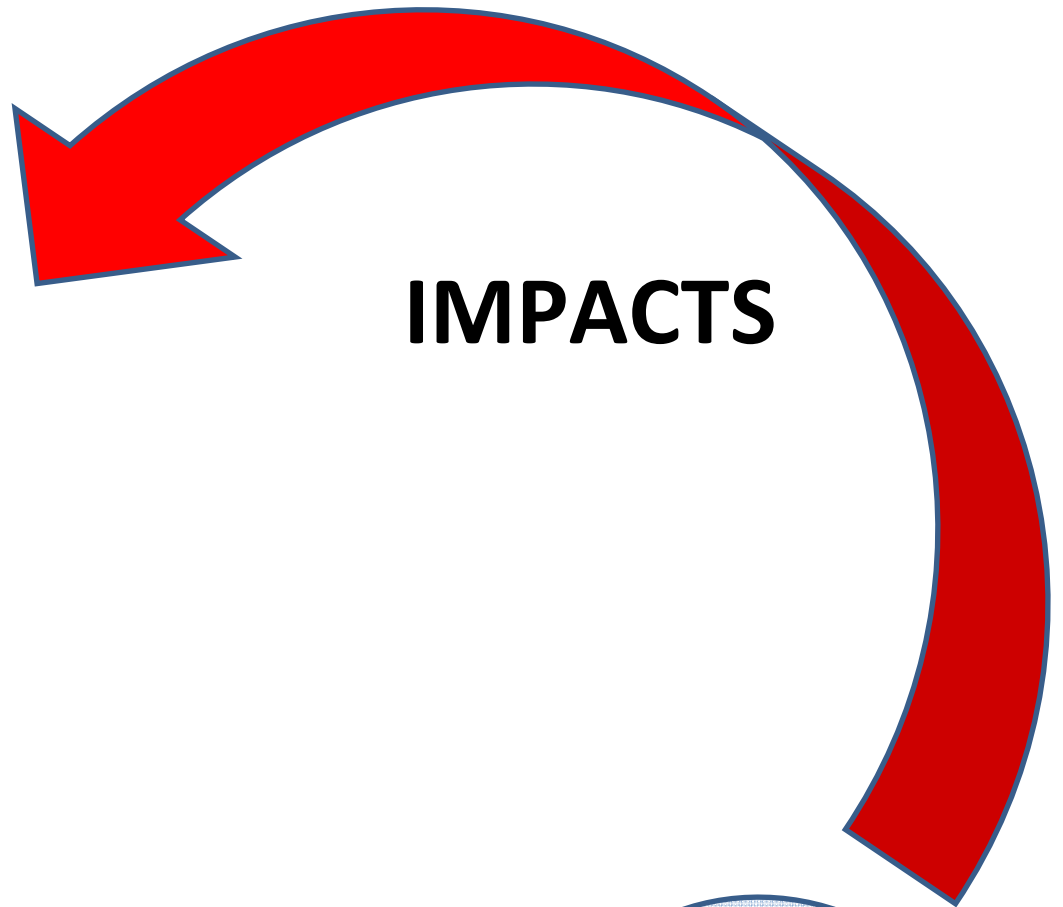
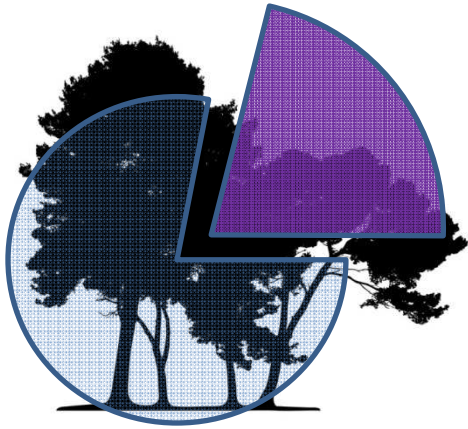
Under valued

IMPACTS

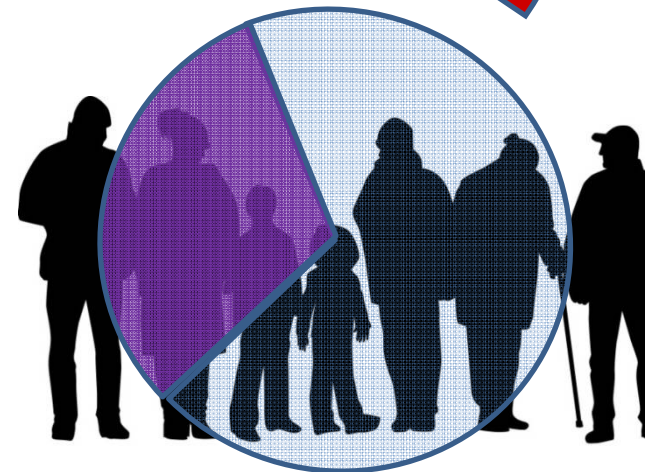


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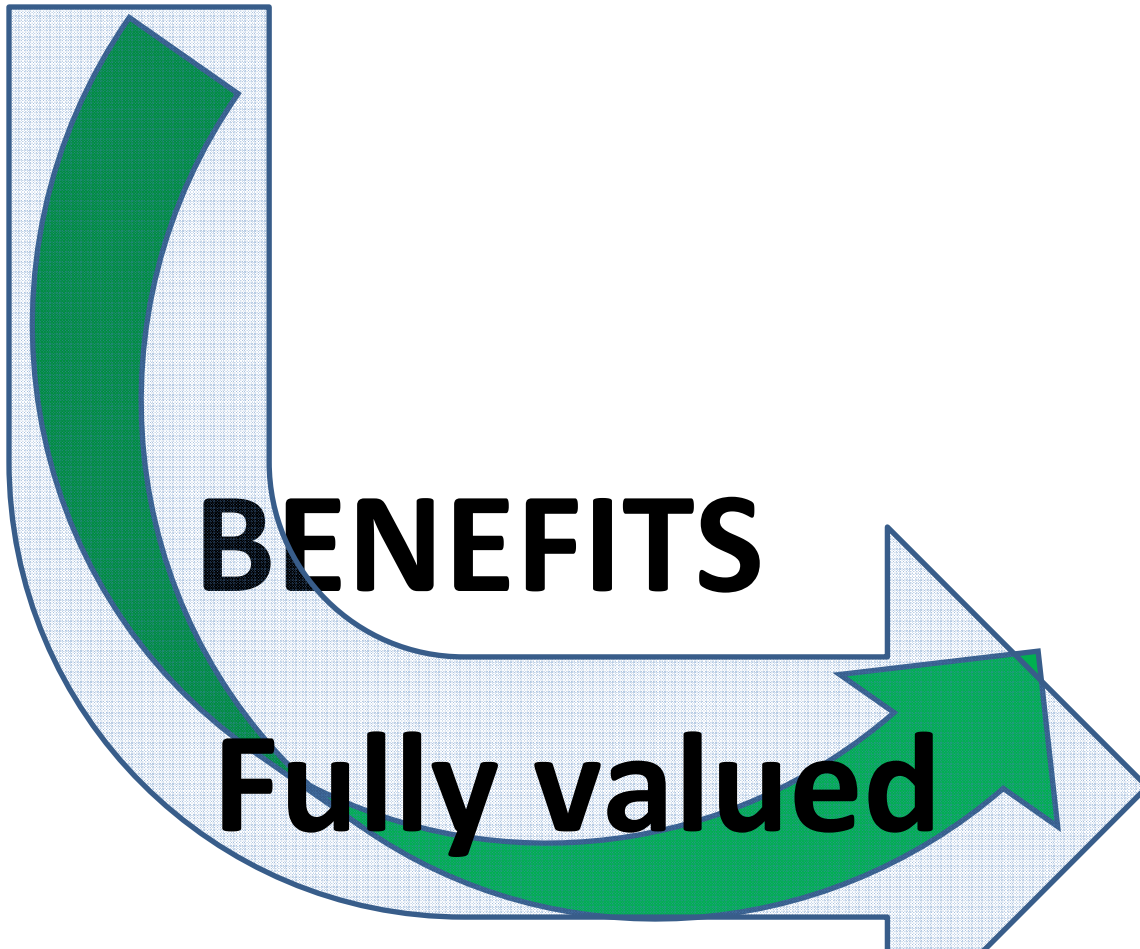


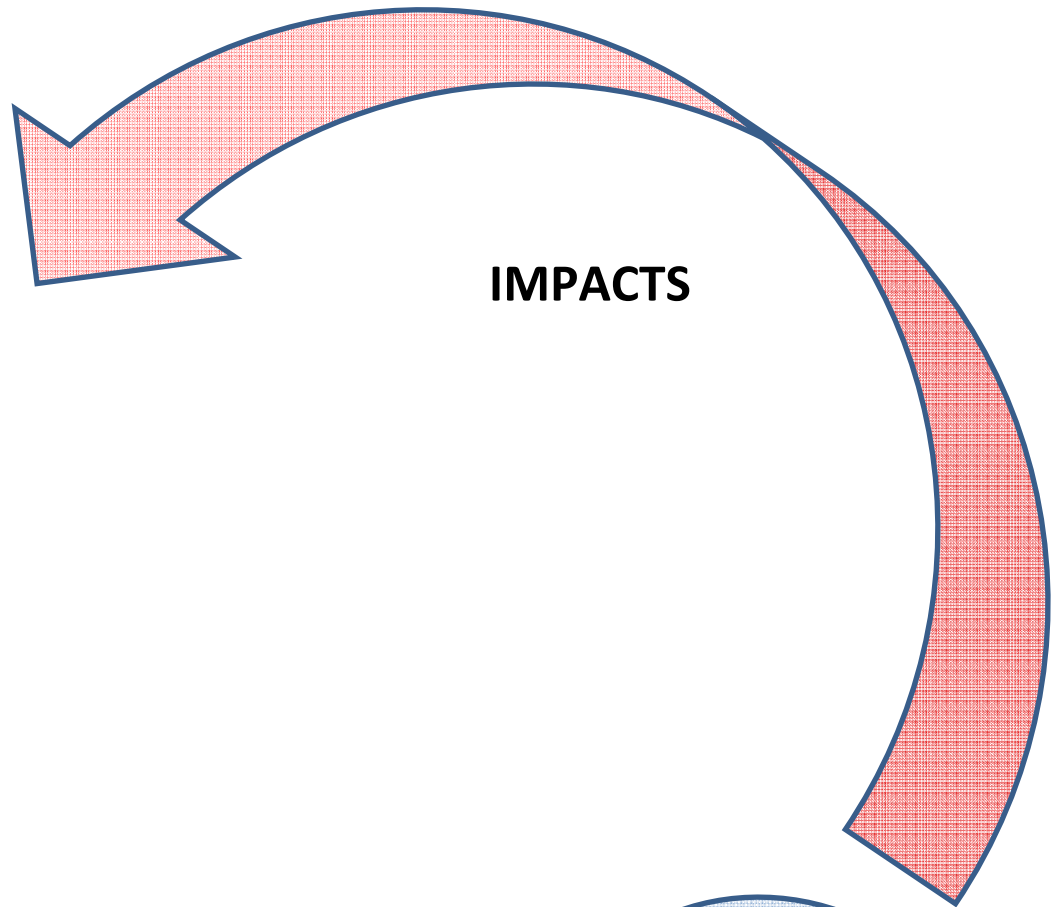
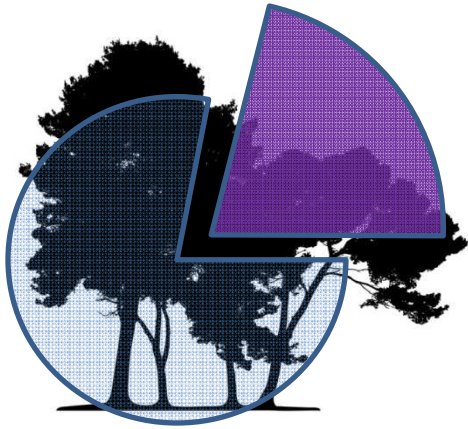
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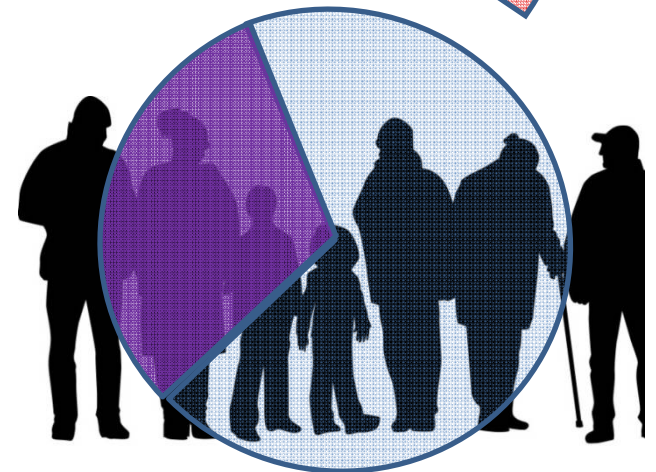
BENEFITS

Fully valued



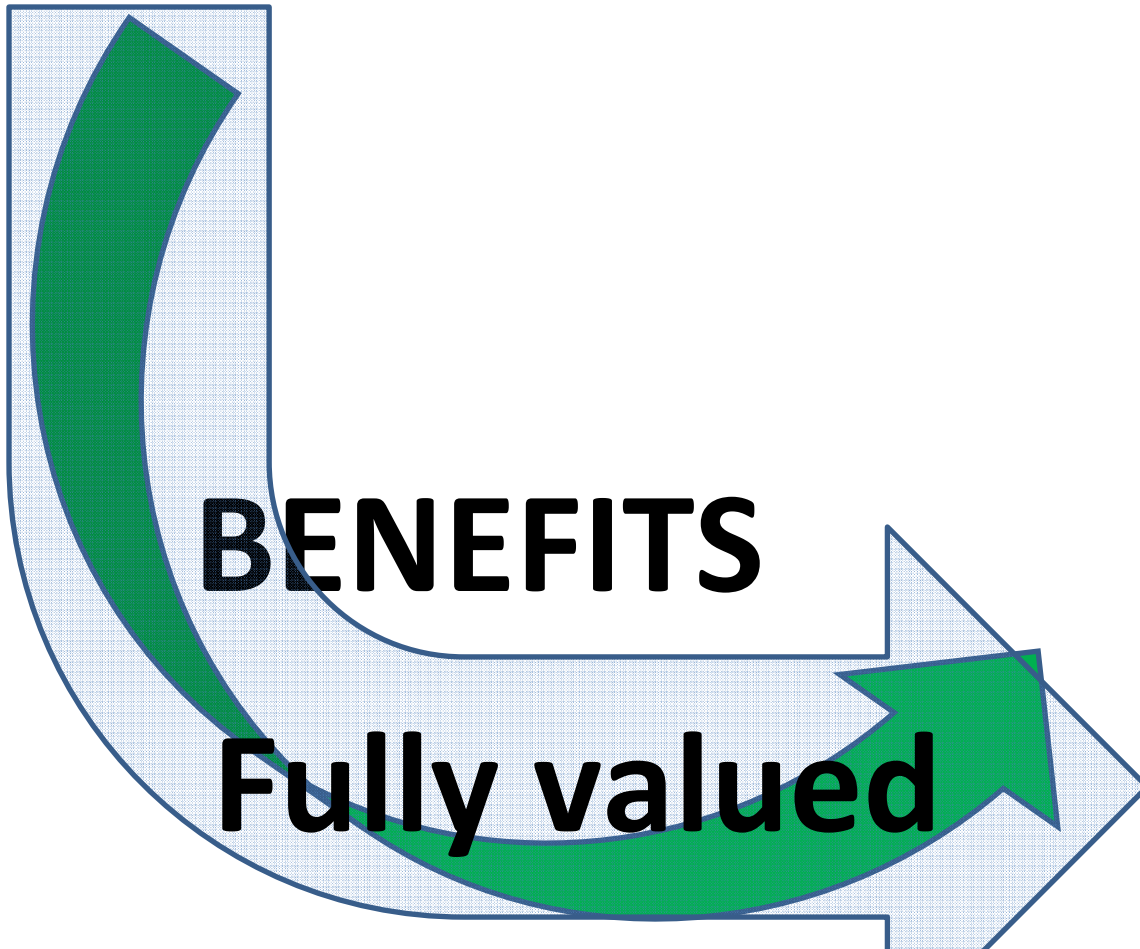


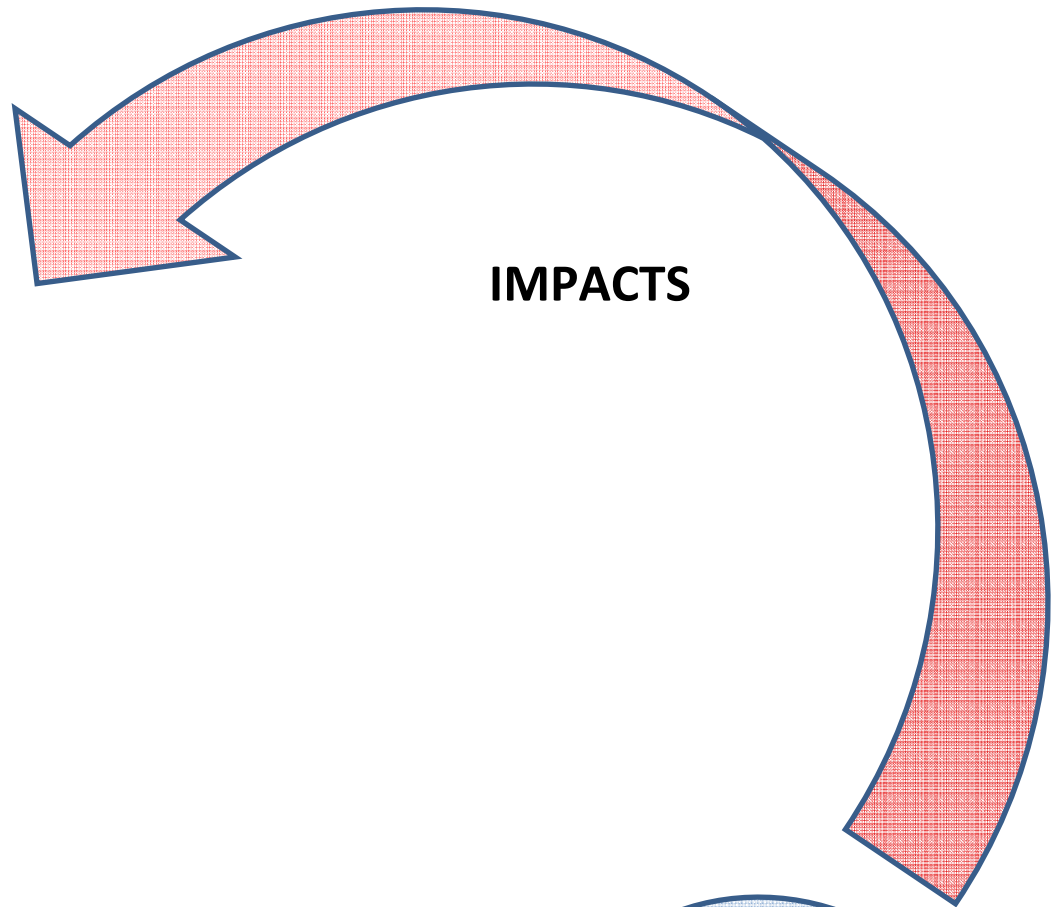
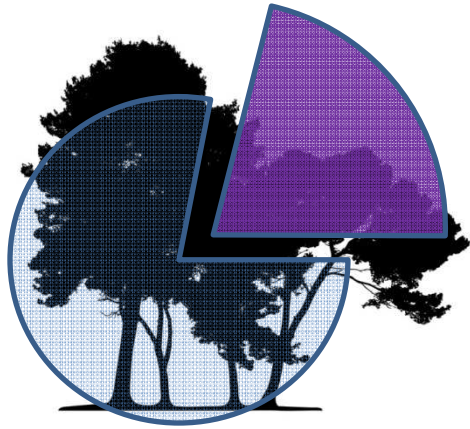
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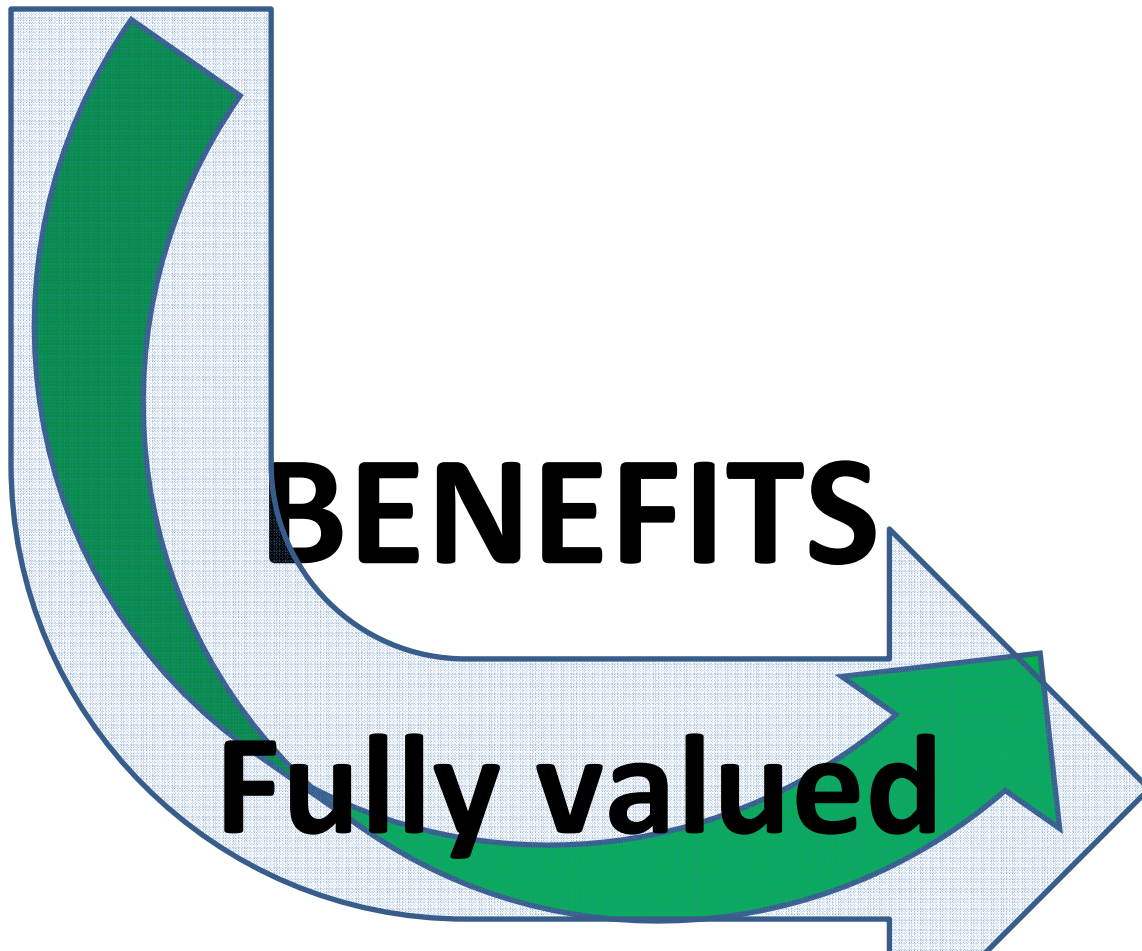
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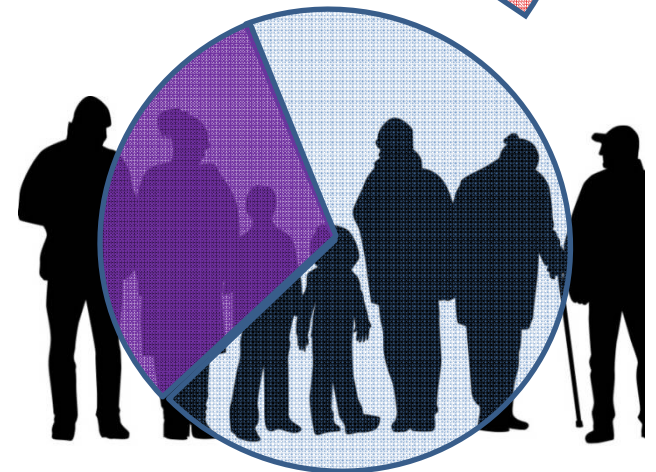


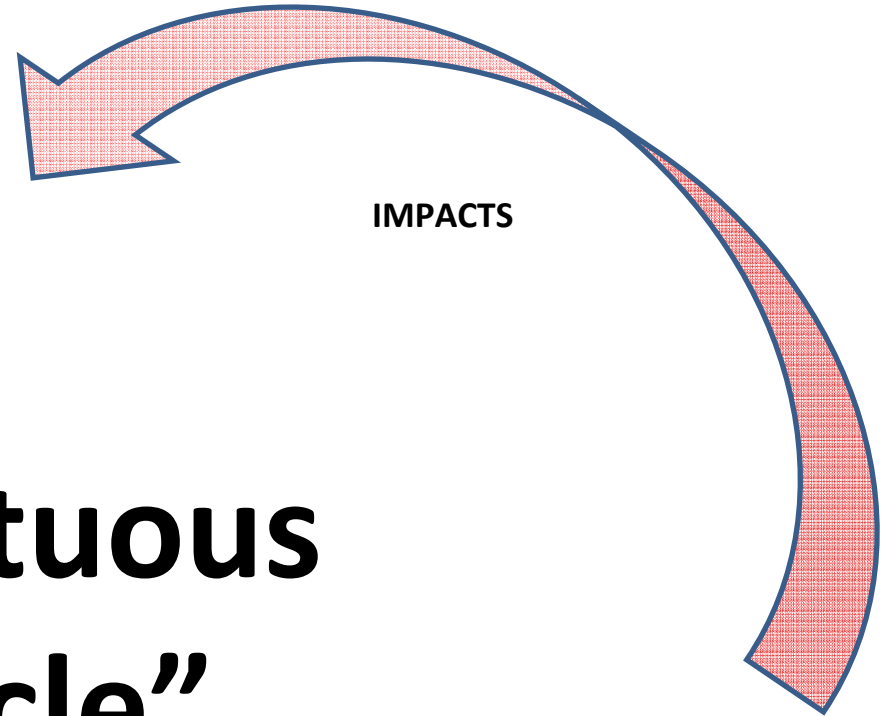
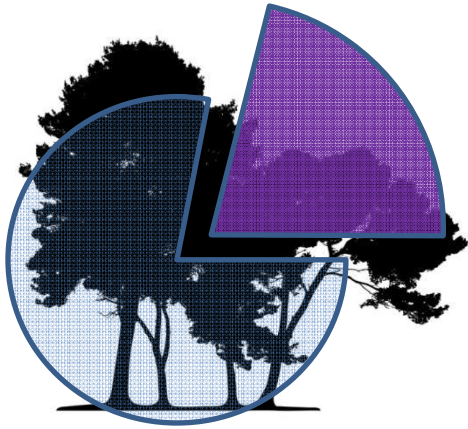
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BENEFITS

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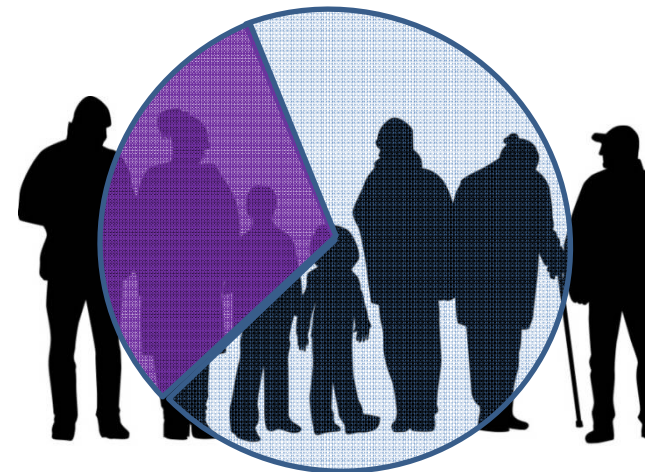


IMPACTS

**“Virtuous
cycle”**

BENEFITS

Fully valued



Under what circumstances is it important to assess and mainstream the values of protected areas and biodiversity?





...when there is a problem caused
by undervaluation



Examples of undervaluation:

1. A road is planned through a large protected area
2. Headwater forests are being degraded
3. Wetlands are being drained
4. Mangroves are being cut down
5. Rivers are being polluted from agricultural waste
6. Poaching is reducing wildlife populations
7. There is mining allowed in protected areas



BUT...protected
areas are not
ATM machines



And protected areas are not piñatas...



Protected areas are a societal investment

SAVINGS DEPARTMENT

No. [REDACTED]

The First National Bank & Trust Company
OF NEWTOWN, PA.

In Account with

Buck Tail Club

Frank R. [REDACTED]

Day	Deposited	Withdrawn	Balance
July 20	221.00		221.00
Aug 27	105		326
Aug 13	204		530
Sept 22	99		629
Sept 4	199.00		828.00
" 17	264.00		1092.00
" 25	117		1199.00
Oct 8	174		1363.00
" 18	72		1435.00
" 23	370		1437.00
" 24	120		1557.00
" 30	105		1663.00
" Nov 13	172.92		1836.52
" 19	117		1953.52
" 21		1000	953.52

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Economic valuation reveals the hidden
benefits of societal investments in
biodiversity protection...

...which leads to better decisions.



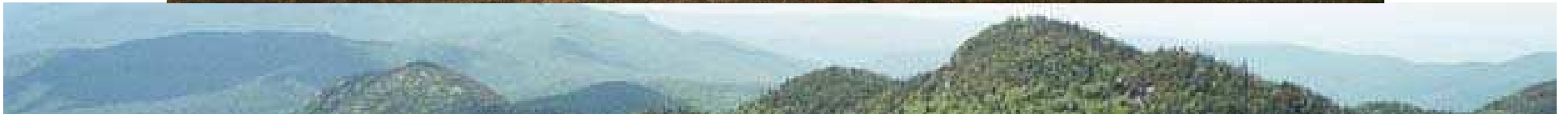
Steps in Assessing Protected Area Values

1. Clearly define the situation, audience and decision
2. Choose which benefits and services are included
3. Choose valuation method for each benefit
4. Develop measurable indicators
5. Analyze the economic and social value of benefits
6. Communicate the results to key decision makers



STEP 1

Clearly define the situation, audience and decision



STEP 1

Clearly define situation, audience and decision



STEP 1

Clearly define situation, audience and decision



STEP 1

Clearly define situation, audience and decision



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Clearly define situation, audience and decision



STEP 1

Clearly define situation, audience and decision



STEP 1

Clearly define situation, audience and decision



Problem that valuation will solve: Existing levels of protection (.2%) and existing management are insufficient to sustain saiga populations, upon which major ecosystem services, livelihoods and human wellbeing depend



STEP 2

Choose which benefits, goods and services are included



STEP 2

Choose ecosystem benefits and services that:

- Are associated with key national goals, such as poverty reduction
- Are easy to measure, have clear indicators and available data
- Are easy to communicate to key stakeholder groups
- Have the highest economic values
- Are the most important benefit across an entire ecosystem or protected area system



STEP 2

Choose which benefits, goods and services are included



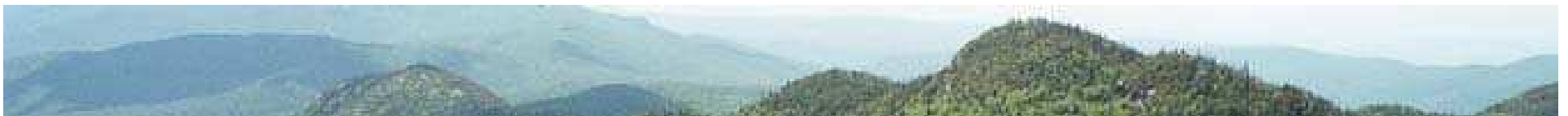
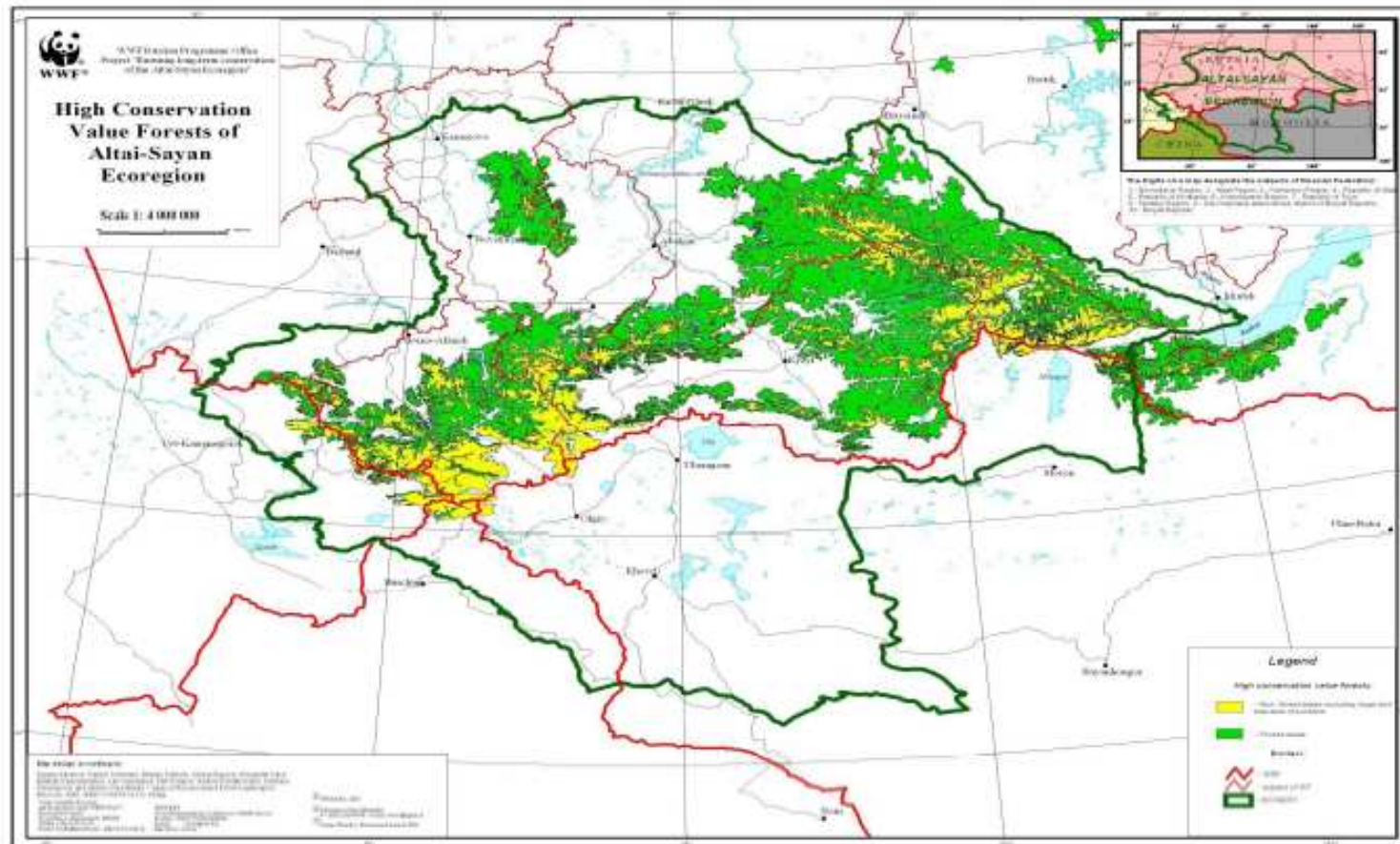
Sustainable livelihoods and subsistence



STEP 2

Choose which benefits, goods and services are included

Carbon storage: 3.21 billion tones of Carbon



STEP 3

Choose a valuation method for each benefit/service

- Market price
- Replacement cost
- Costs avoided
- Net factor income
- Willingness to pay
- Contingent valuation
- Value comparison study



STEP 4

Develop measurable indicators

Ecosystem service	Potential Indicator
Food security	<ul style="list-style-type: none">• Average protein intake per person
Health	<ul style="list-style-type: none">• # and % of people using medicinal plants
Fisheries	<ul style="list-style-type: none">• List and volume of annual catch• # of people employed• Total \$US added to economy
Disaster mitigation	<ul style="list-style-type: none">• Hectares of avoided erosion• # of people protected from flooding
Water supply	<ul style="list-style-type: none">• Volume (cubic meters/second) from PAs• Hectares irrigated• Energy in megawatts from hydropower

STEP 4

Develop measurable indicators



- Number of families who rely on grazing
- Value of livestock that depends on grassland

STEP 5

Develop and implementation valuation assessment



STEP 5

Develop and implementation valuation assessment

- Develop description of work
- Develop terms of reference
- Develop methodology
- Develop budget for staffing, experts, communication
- Develop timeline
- Conduct assessment



STEP 6

Communicate the results to key decision makers

Simple

Powerful

Actionable

Surprising

Targeted

Iconic

Concrete



STEP 6

Communicate the results to key decision makers



Kazakhstan agreed to a goal of establishing 6 million hectares of protected areas in key Saiga habitat by 2030

TARGET 2: Mainstreaming and integration

“By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes....”



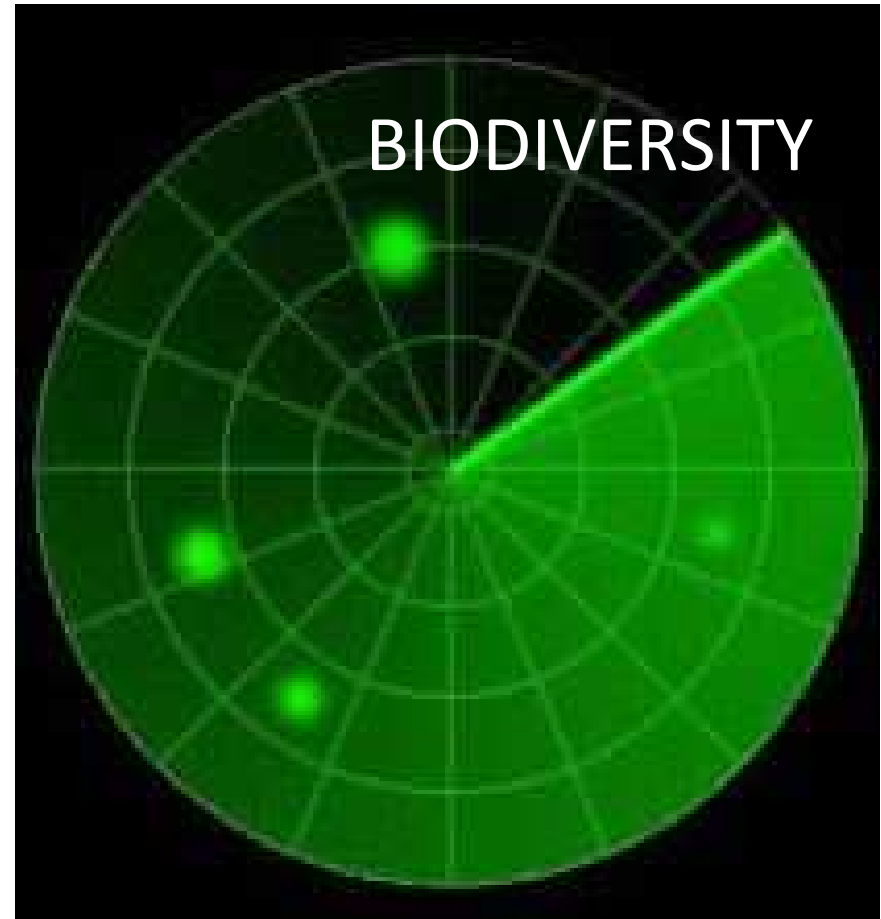
Mainstreaming and integration

To place
biodiversity into
economic decision-
making
frameworks...



Mainstreaming and integration

...in other words, to place biodiversity on the radar screen of major decision makers...



Mainstreaming and integration



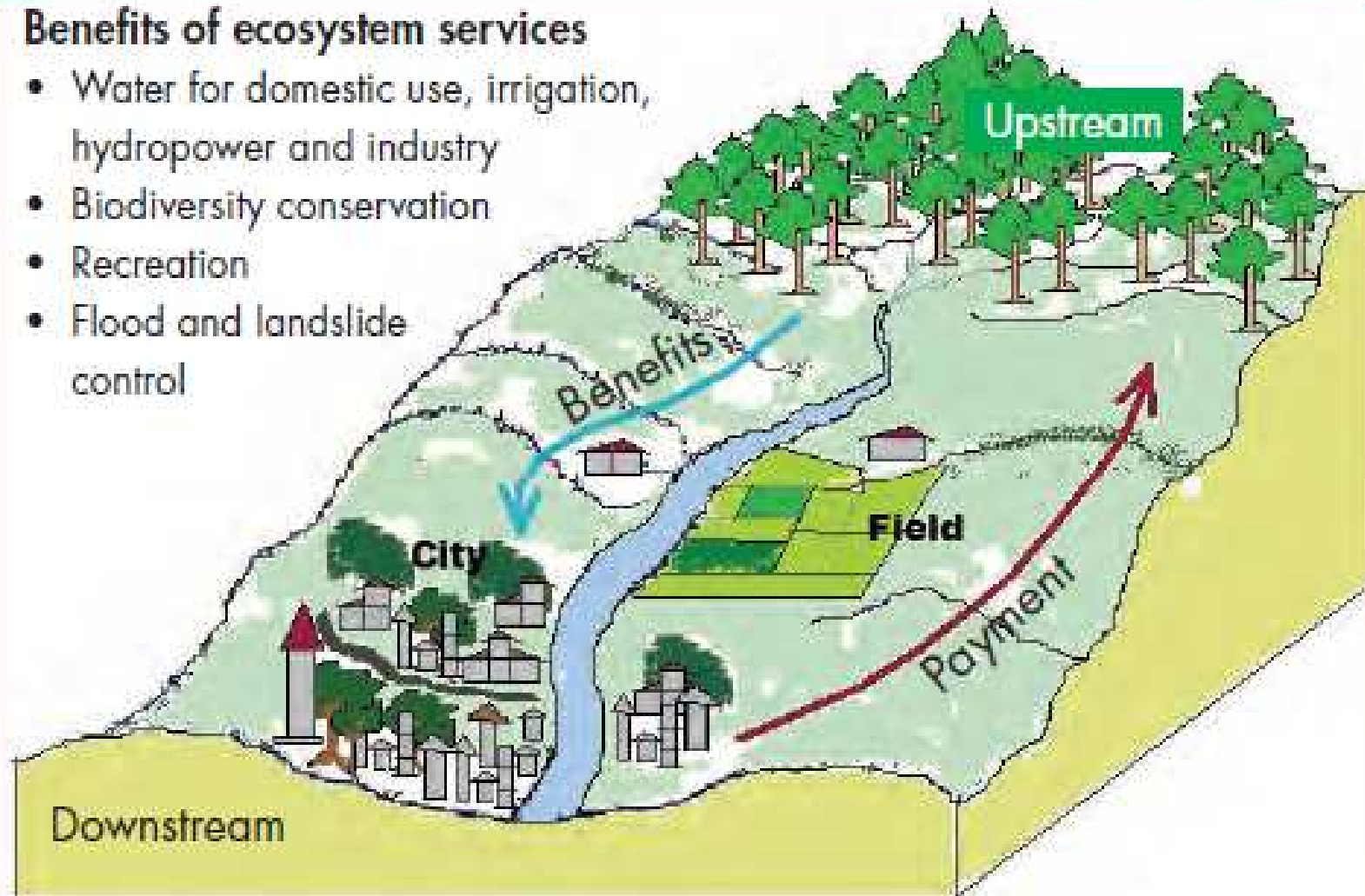
...in order to make
better societal
decisions.



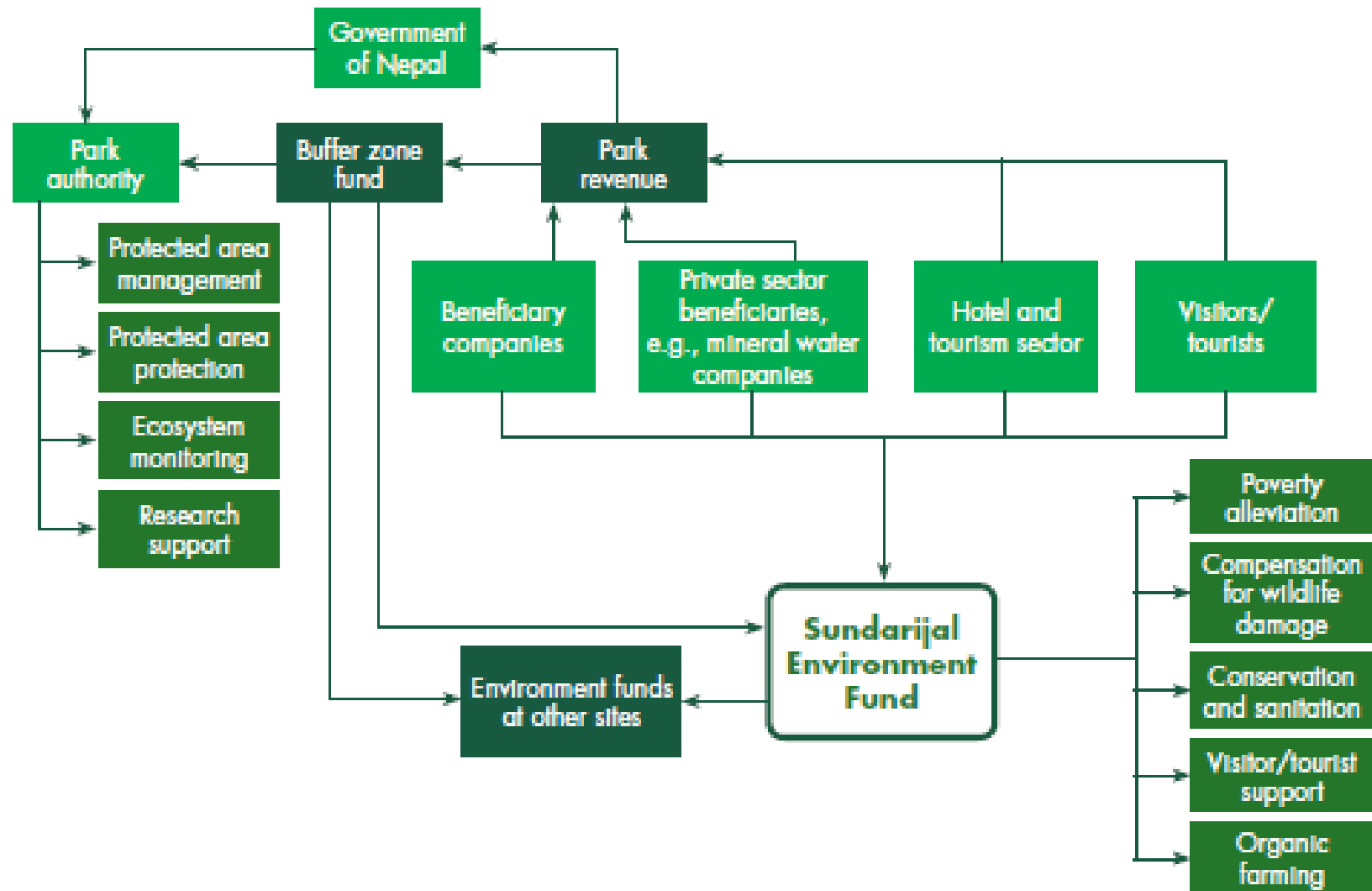
Example from Nepal

Benefits of ecosystem services

- Water for domestic use, irrigation, hydropower and industry
- Biodiversity conservation
- Recreation
- Flood and landslide control



Example from Nepal

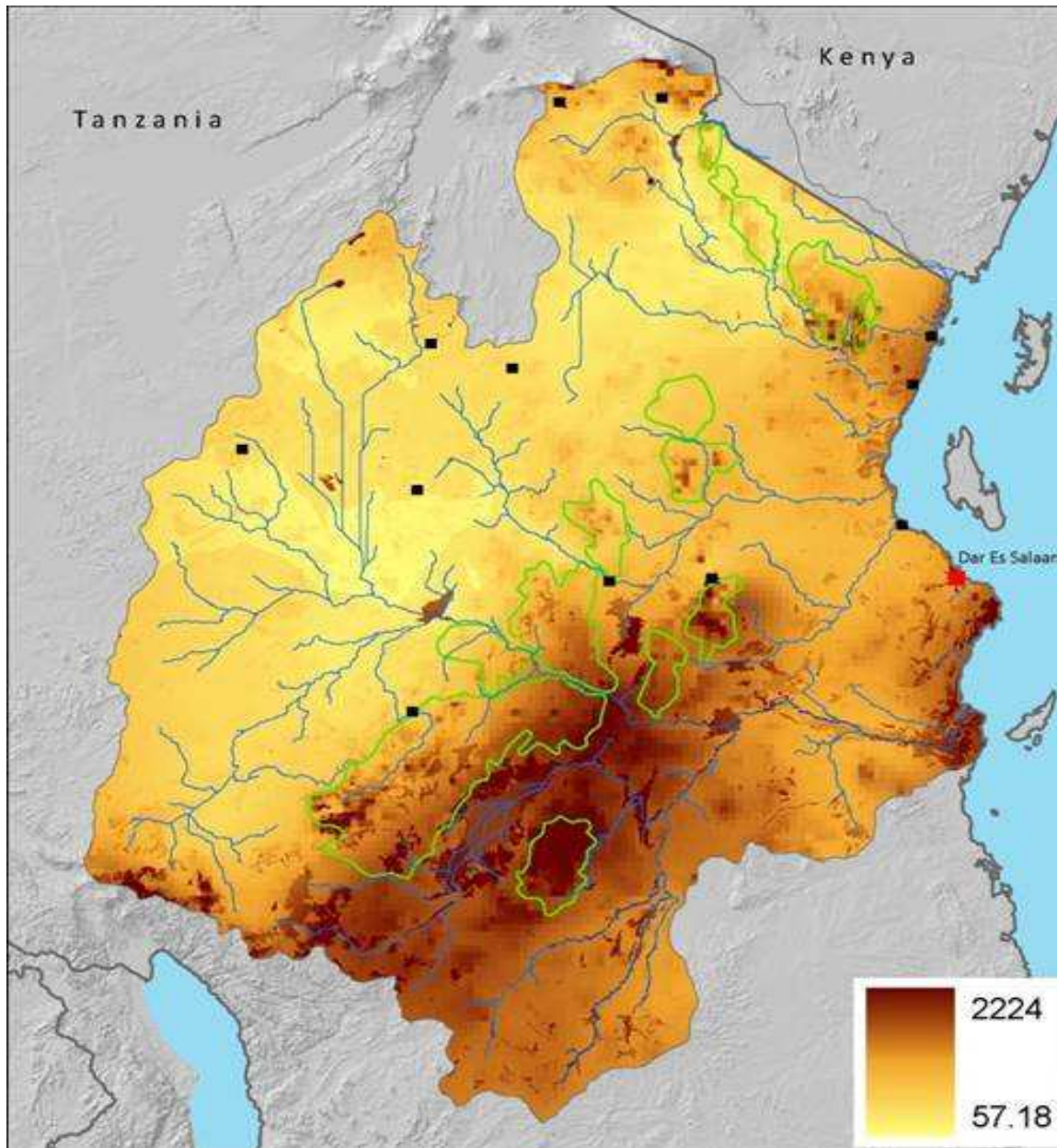


TARGET 2: Mainstreaming and integration

“By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes....”



Mainstreaming and integration



Forests important for water storage in Tanzania are also important for:

- Protected area planning
- Land use planning
- Forestry practices
- Water management
- Social development

Setting National Targets

Some possible examples from Tanzania:

- By 2020, 80% of forests critically important for water storage are fully protected
- By 2015, the forestry sector manages forests in key areas of the Eastern Arc primarily for the objective of water storage and quality
- By 2020, 30% of the degraded forests have been restored using payments for ecosystem services (water fees)



Exercise

Think of a situation in your country where protected area valuation is needed. In small groups, discuss each step:

1. Clarify the situation
2. Identify the benefits/services
3. Choose the method
4. Select indicators
5. Develop plan and conduct analysis
6. Communicate the results



Exercise

- Based on the example you've chosen, identify 1-2 relevant sectors.
- Identify specific opportunities for mainstreaming and integrating the results of the valuation study
- Then identify a potential national target using that example
- Complete exercise and post both the matrix and your target on the wall



Exercise

Exercise: Choose a specific case in which there is a problem caused by the undervaluation of a protected area. Using this case, discuss some ideas for completing each step. Be as specific as you can. Then discuss a) how you might integrate and mainstream this value into the economy and sectoral plans; and b) whether or not you think the valuation plan and the integration/mainstreaming plan will resolve the problem that you have identified.

Step 1: Clarify the context	Step 2: Identify the benefits and services	Step 3: Choose the methodology
Step 4: Identify indicators	Step 5: Assess the PA and biodiversity values	Step 6: Communicate the results

Steps for sectoral integration and mainstreaming:

Sector/planning process	Opportunities for integration and mainstreaming of protected area and biodiversity values

Context:

Mangrove forests
are being
destroyed,
resulting in
collapse of
fisheries

National Target:



Exercise

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Steps for sectoral integration and mainstreaming:

Sector/planning process	Opportunities for integration and mainstreaming of protected area and biodiversity values

Benefits:

Local fisheries

Local livelihoods

National Target:



Exercise

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Steps for sectoral integration and mainstreaming:

Sector/planning process	Opportunities for integration and mainstreaming of protected area and biodiversity values

Approach:

Market value

National Target:



Exercise

Exercise: Choose a specific case in which there is a problem caused by the undervaluation of a protected area. Using this case, discuss some ideas for completing each step. Be as specific as you can. Then discuss a) how you might integrate and mainstream this value into the economy and sectoral plans; and b) whether or not you think the valuation plan and the integration/mainstreaming plan will resolve the problem that you have identified.



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Steps for sectoral integration and mainstreaming:

Sector/planning process	Opportunities for integration and mainstreaming of protected area and biodiversity values

Indicators:

- Tons of fish consumed
- \$ earned in revenue by community
- Protein consumed

National Target:



Exercise

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Steps for sectoral integration and mainstreaming:

Sector/planning process	Opportunities for integration and mainstreaming of protected area and biodiversity values

Plan:

NBSAP team to
oversee study

National consultant
to conduct study

Expert peer review

National Target:



Exercise

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Steps for sectoral integration and mainstreaming:

Sector/planning process	Opportunities for integration and mainstreaming of protected area and biodiversity values

Communicate:

- Media campaign aimed at coastal communities
- Targeted meetings with energy sector

National Target:



Exercise

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Steps for sectoral integration and mainstreaming:

Sector/planning process	Opportunities for integration and mainstreaming of protected area and biodiversity values

Sector:
Energy

Mainstreaming Opportunity:
Lobby energy sector for sustainable energy alternatives for coastal communities

National Target:



Exercise

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National Target:

By 2020, all remaining mangrove forests (as of 2011) are protected, 30% of degraded mangroves are under restoration, and long-term mechanisms are in place to provide alternative fuel to coastal communities

